

REMARKS

Favorable reconsideration of this application, in light of the preceding amendments and following remarks, is respectfully requested.

Claims 1-28 are pending in this application. By this Amendment claims 1-2, 4, 18 and 21 are amended and no claims have been cancelled. No new matter is added. Claims 1, 18, and 21 are the independent claims. Example support for the amendments herein may be found at Fig. 2 and Para. [0029] of Applicants' application.

Allowable Subject Matter

Applicants note with appreciation that the Examiner has deemed claim 15 as containing allowable subject matter.

Rejections under 35 U.S.C. § 103

Watanabe/Conrads

Claims 1-4, 6-8, 10, 13, 14, 17, 18, 21-23, and 25-28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over US Patent No. 7,102,677 ("Watanabe") in view of US Patent No. 5,184,018 ("Conrads"). Applicants respectfully traverse this rejection for the reasons detailed below.

Amended independent claim 1 recites *inter alia*, "each of the pixels including **only a photoelectric transformation element and a switching element.**" The Examiner relies on Fig. 7 of Watanabe to disclose the "pixel" of amended claim 1. As disclosed at Col. 1, Ln. 32-35 and shown in Fig. 7, each "pixel" of Watanabe includes at least "a **photodiode (PD) 1, and four transistors**, i.e., a transfer gate transistor 2, a reset gate transistor 3, an amplification transistor 4, and a pixel selection transistor 5." The Examiner relies on photodiode 1 in Fig. 7 of Watanabe to disclose the

“photoelectric transformation element” of amended claim 1. Therefore, even if the Examiner relies on one of the four transistors 2-5 of Watanabe to disclose the “switching element” of amended claim 1, such as “pixel selection transistor 5,” **each pixel of Watanabe still includes at least three additional elements, such as transistors 2-4.** As such, Watanabe fails to disclose “each of the pixels including **only a photoelectric transformation element and a switching element,**” as recited in amended claim 1.

The Examiner also relies on the sensor S_{1,1} in Fig. 1 of Conrads to disclose part of amended claim 1. Assuming the Examiner interprets the “photodiode 1” in Fig. 1 of Conrads to read on the “photoelectric transformation element” of amended claim 1 and the “switching transistor 3” in Fig. 1 of Conrads to read on the “switching element” of amended claim 1, **sensor S_{1,1} in Fig. 1 of Conrads still includes at least one additional element, such as storage capacitance 2.** As such, Conrads also fails to disclose “each of the pixels including **only a photoelectric transformation element and a switching element,**” as recited in amended claim 1.

For at least foregoing reasons, amended claim 1 is patentable over Watanabe and Conrads. Even assuming *arguendo* that Watanabe and Conrads are combinable (which Applicants do not admit), Conrads still fails to remedy the deficiencies of Watanabe with respect to claim 1. Amended independent claims 18 and 21 are at least somewhat similar to claim 1 and therefore patentable for at least somewhat similar reasons. Dependent claims 2-4, 6-8, 10, 13, 14, 17, 22-23 and 25-28 are at least patentable by virtue of their dependency on one of independent claims 1 and 21. Applicants, therefore, respectfully request that the rejection to the above claims under 35 U.S.C. § 103(a) be withdrawn.

Watanabe/Conrads/Yang

Claim 5 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Watanabe in view of Conrads in further view of US Patent No. 6,180,969 ("Yang"). Applicants respectfully traverse this rejection for the reasons detailed below.

Even assuming *arguendo* that Watanabe, Conrads and Yang are combinable (which Applicants do not admit), Yang still fails to remedy the deficiencies of Watanabe and Conrads with respect to amended claim 1. Dependent claim 5 is at least patentable by virtue of its dependency on amended independent claim 1. Applicants, therefore, respectfully request that the rejection to the above claims under 35 U.S.C. § 103(a) be withdrawn.

Watanabe/Conrads/Prater

Claims 9, 11, 16, 19, and 24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Watanabe in view of Conrads in further view of US Patent No. 5,654,537 ("Prater"). Applicants respectfully traverse this rejection for the reasons detailed below.

Even assuming *arguendo* that Watanabe, Conrads and Prater are combinable (which Applicants do not admit), Prater still fails to remedy the deficiencies of Watanabe and Conrads with respect to amended claims 1, 18 and 21. Dependent claims 9, 11, 16, 19, and 24 are at least patentable by virtue of their dependency on one of amended independent claims 1, 18 and 21. Applicants, therefore, respectfully request that the rejection to the above claims under 35 U.S.C. § 103(a) be withdrawn.

Watanabe/Prater/Yang

Claims 12 and 20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Watanabe in view of Conrads in further view of Prater in further

view of Yang. Applicants respectfully traverse this rejection for the reasons detailed below.

Even assuming *arguendo* that Watanabe, Conrads, Prater and Yang are combinable (which Applicants do not admit), Prater and Yang still fail to remedy the deficiencies of Watanabe and Conrads with respect to amended claims 1 and 18. Dependent claims 12 and 20 are at least patentable by virtue of their dependency on one of amended independent claims 1 and 18. Applicants, therefore, respectfully request that the rejection to the above claims under 35 U.S.C. § 103(a) be withdrawn.

CONCLUSION

In view of the above remarks and amendments, the Applicants respectfully submit that each of the pending objections and rejections has been addressed and overcome, placing the present application in condition for allowance. A notice to that effect is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to contact the undersigned.


Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Gary D. Yacura, at the telephone number of the undersigned below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

HARNESS, DICKEY, & PIERCE, P.L.C.

By

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